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Self-Care Agency and Self-Care Practice of Adult African Americans With Type 2 Diabetes

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SELF- CARE AGENCY AND SELF- CARE PRACTICE OF ADULT AFRICAN
AMERICANS WITH TYPE 2 DIABETES

By

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A thesis submitted to the faculty of
Gardner-Webb University School of Nursing
in partial fulfillment of the requirements for the
Degree of Master of Science in Nursing

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Date

Abstract

The purpose of the study was to identify and examine the concepts of self-care agency and self-care practice of African American adults diagnosed with type 2 diabetes, living in the local community. The research questions addressed were:

- 1) What is the self-care agency of adult African Americans diagnosed with type 2 diabetes?
- 2) What is the self-care practice of adult African Americans diagnosed with type 2 diabetes?
- 3) Is there a relationship between self-care agency and self-care practice in adult African Americans diagnosed with type 2 diabetes?

The Denyes Self-Care Agency Instrument (DSCAI-90) and the Denyes Self-Care Practice Instrument (DSCPI-90) were used to survey a convenience sample of 40 adult African Americans with type 2 diabetes, living in the community. Findings revealed that self-care agency and self-care practice were present, and there was a positive correlation between the two concepts. The results of this study supported the usefulness of Orem's Self-Care Deficit Nursing Theory (SCDNT) (2001) with adult African American diabetic populations and identified the need for further research to examine self-care in other African American populations.

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Chapter 1: Introduction

Diabetes mellitus is a group of diseases characterized by high blood glucose levels, which result from defects in the body's ability to produce and/or use insulin (American Diabetes Association (ADA), 2011). The most common type of diabetes is type 2. In type 2 diabetes, the body does not produce enough insulin, or the cells ignore the insulin that is produced (ADA, 2011). There is an increased prevalence of type 2 diabetes, particularly among older adults and minority populations such as African Americans, Latinos, Native Americans, Asian Americans, Native Hawaiians and other Pacific Islanders (ADA, 2011). Type 2 diabetes is associated with older age, obesity, family history of diabetes, previous history of gestational diabetes, physical inactivity, and ethnicity (LeMone & Burke 2008). According to the National Diabetes Fact Sheet 25,800,000 children and adults in the United States (US), approximately 8.3% of the population, have diabetes. The prevalence of diabetes is 70% higher among African Americans, and close to 100% higher among Hispanics than among whites (ADA, 2011). The 2007-2009 national survey data for people diagnosed with diabetes, aged 20 years or older, include the following prevalence by race/ethnicity: 7.1% of non-Hispanic whites, 8.4% of Asian Americans, 12.6% of non-Hispanic blacks, and 11.8% of Hispanics (ADA, 2011).

Background

In the United States (US) approximately 18,800,000 people are diagnosed with diabetes, with seven million people remaining undiagnosed, and 79 million people being pre-diabetic (ADA, 2011). African Americans are disproportionately affected by diabetes in comparison with the general population, with 3.7 million, or 14.7 % of all African Americans aged 20 years or older having diabetes (ADA, 2011). Approximately 25 % of African Americans between the ages of 65 and 74 have diabetes, with one in four African American women over 55 years of age

having diabetes (ADA, 2011). According to the ADA (2011), 1,900,000 new cases of diabetes were diagnosed in people aged 20 years and older in 2010. The costs of diagnosing, treating, and managing diabetes are staggering. The total costs of diagnosed diabetes in the US in 2007 were approximately 174 billion dollars, with 116 billion dollars for direct medical costs, and 58 billion dollars for indirect costs such as disability, work loss, and premature mortality (ADA, 2011). Prescription costs alone have more than quadrupled, from four billion dollars in 2007 to 19 billion dollars (Anderson, 2011). After adjusting for population age and sex differences, average medical expenditures among people with diagnosed diabetes were 2.3 times higher than those without diabetes (ADA, 2011).

The facts on diabetes identify it as a growing health problem particularly in the minority populations. Why is the prevalence of type 2 diabetes so much higher in the African American population? The purpose of the study was to examine the concepts of self-care agency and self-care practice in the adult African American population, based on Orem's Self-Care Deficit Nursing Theory (SCDNT).

Theoretical Framework

In this research study, Self-Care Agency and Self-Care Practice of Adult African Americans with Type 2 Diabetes, Orem's Self-Care Deficit Nursing Theory (SCDNT) (2001) was utilized as the conceptual framework. Orem's general theory is made up of three related theories: the theory of self-care, the theory of self-care deficit, and the theory of nursing systems (Orem, 2001). The study utilized Orem's related theory of self-care, which describes how and why people care for themselves (Tomey & Alligood, 2006). The conceptual model concepts identified and explored in the research were self-care agency and self-care practice.

The theory of self-care states that self-care is a human regulatory function that individuals must perform themselves to maintain life, health, development, and well-being (Tomey & Alligood, 2006). Self-care must be learned and performed deliberately and continuously to regulate function related to regulatory requirements (Tomey & Alligood, 2006). Regulatory requirements are related to stages of growth and development, states of health, levels of energy expenditure, and environmental factors (Tomey & Alligood, 2006). The study identified and explored self-care in the sample population of African Americans with type 2 diabetes.

The theory of self-care deficit is related to the limitations of mature or maturing persons to perform self-care (Tomey & Alligood, 2006). Self-care is defined as the relationship between one's therapeutic self-care demands and their powers of self-care agency, or self-care ability (Tomey & Alligood, 2006). Self-care deficit is the limitations or inability of an individual to provide self-care performance or measures (Tomey & Alligood, 2006). The development of self-care agency constitutes the development of self-care capabilities (Tomey & Alligood, 2006). The study examined self-care agency and self-care practice in the sample population of adult African Americans with type 2 diabetes, and attempted to identify areas of self-care deficit that could impact diabetic self-care. Areas of self-care deficit would require the implementation of nursing systems.

The theory of nursing systems proposes that nursing is the human action or action systems for persons with health associated limitations of self-care (Tomey & Alligood, 2006). Helping methods related to nursing were defined as a series of actions that, if performed, would overcome or compensate for the health related limitations of an individual's self-care (Tomey & Alligood, 2006). Nurses use the helping methods singularly or in combination to assist the person in their

self-care (Tomey & Alligood, 2006). These helping methods include acting for or doing for another, guiding and directing, providing physical or psychological support, providing and maintaining an environment that supports personal development, and teaching (Tomey & Alligood, 2006). Nursing agency includes deliberate action, including intentionality, and operations of diagnosis, prescription, and regulation (Tomey & Alligood, 2006). The goal of nursing agency is to compensate or overcome known or emerging health-associated limitations for patients regarding their self-care (Tomey & Alligood, 2006). The study attempted to identify and examine areas of self-care deficit in the sample population, in order to provide information that could be utilized to improve nursing interventions in African American diabetic care.

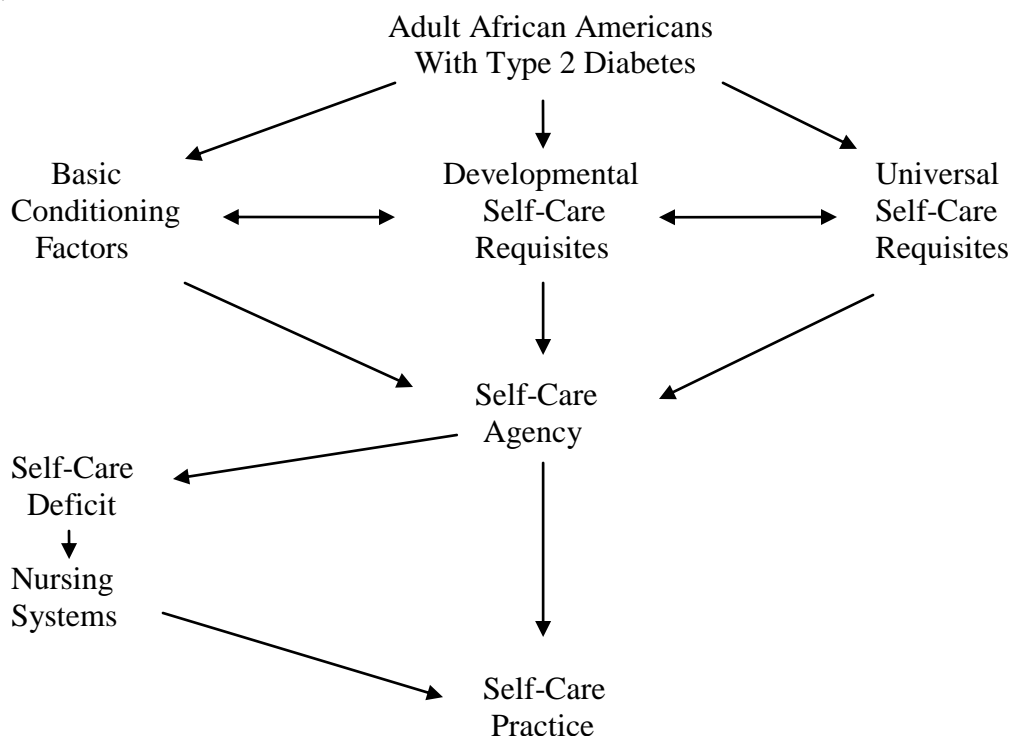
Self-care practice is defined as the practice of activities that maturing and mature persons initiate and perform, within time frames, on their own behalf, in the interest of maintaining life and healthful functioning (Tomey & Alligood, 2006). Self-care practice continues through a person's stages of growth and development, states of health, levels of energy expenditure, and environmental factors (Tomey & Alligood, 2006).

Self-care agency is the acquired ability of mature persons to know and meet the requirements of human functioning and development (Tomey & Alligood, 2006). Self-care agency is the result of developmental processes, and is promoted when the person is able to perform the self-care that is required to support human functioning, development, and health (Slusher, 1999). The researcher collected data from the sample population, related to their self-care agency or their ability to provide diabetic care for themselves.

All individuals are assumed to have self-care requisites, required actions that regulate factors that affect human functioning and development (Slusher, 1999). The two types of self-care requisites used in the conceptual framework in this study were universal and developmental self-

care requisites (Slusher, 1999). Universal self-care requisites are common to all human beings during the entire life cycle (Slusher, 1999). They are associated with life processes and general well-being, such as sufficient intake of air, food, or water, elimination processes, balance between activity and rest, solitude and social interaction, prevention of hazards to human life, and promotion of human functioning and development (Tomey & Alligood, 2006). Developmental self-care requisites are requisites associated with developmental processes, with events that occur in different stages of the life cycle (Slusher, 1999). Developmental self-care requisites include the provision of conditions that promote development, the engagement of self-development, and the prevention of or overcoming effects of human conditions and life situations that affect human development (Tomey & Alligood, 2006). The diagram (Figure 1) shows the conceptual framework of Orem's SCDNT for the study. The conceptual framework illustrated the assumption that adult African American diabetics utilize basic conditioning factors, developmental self-care requisites, and universal self-care requisites to formulate self-care agency, and in turn enable self-care practice. When a self-care deficit occurs, nursing agency is needed to either provide the appropriate care or teach the person how to provide self-care. Figure 1 illustrates the relationships of the theory concepts, with the lines representing the relationships between self-care practice, self-care agency, self-care needs, self-care deficit, and nursing agency.

Figure: 1



Conceptual framework: Self-Care Agency and Self-Care Practice of Adult African Americans diagnosed with Type 2 Diabetes (Slusher, 1999).

Purpose

The purpose of the study was to identify and examine the concepts of self-care agency and self-care practice of African American adults diagnosed with type 2 diabetes, living in the local community. The research questions addressed were:

- 1) What is the self-care agency of adult African Americans diagnosed with type 2 diabetes?
- 2) What is the self-care practice of adult African Americans diagnosed with type 2 diabetes?
- 3) Is there a relationship between self-care agency and self-care practice in adult African Americans diagnosed with type 2 diabetes?

Chapter 2: Literature Review

The review of the literature utilized electronic databases such as Academic OneFile, EBSCOhost, and the Cumulative Index to Nursing and Allied health Literature (CINAHL), to explore the concepts of self-care agency and self-care practice in adult African Americans diagnosed with type 2 diabetes living in the local community. In addition, knowledge about self-care and chronic disease management was explored. Orem's Self Care Deficit Nursing Theory (SCDNT) (2001) was discussed as the theoretical framework of the research study.

Self-Care

Little is known about whether the access to health care affects self-care practices of the chronically ill African American. A qualitative interview study of African Americans conducted by Becker, Gates, and Newson (2004) explored the social, cultural, and historical roots of African Americans' approaches to self-care. One hundred sixty-seven African Americans aged 21 to 91 years, who had one or more chronic illnesses, were interviewed three times in a one year period. The aim of the study was to demonstrate cultural influences on self-care approaches and how self-care practices are tied to broader cultural and social themes (Becker, et al., 2004). Findings of the study indicated that self-care practices were culturally based, and persons with health insurance reported more extensive programs of self-care (Becker, et al., 2004). The study concluded that the cultural components of self-care have been underemphasized, and the potential to maximize chronic illness management through self-care strategies is not realized for individuals who lack access to health care (Becker, et al., 2004). Limitations of the study were that the sample was drawn from one geographic area, and from volunteers that were recruited through a variety of means such as flyers and referrals. The study addressed the cultural basis of self-care practices of the African American with a chronic disease. The study related that self-

care needs to be understood as a process that evolves over time, and develops in relation to the types of illnesses people experience, and their specific concerns over their health (Becker, et al., 2004).

A descriptive correlational study by McCleary-Jones, (2011) examined health literacy and its association with diabetes knowledge, perceived self-care efficacy, and disease self-management among African Americans with diabetes mellitus. Fifty English speaking adult African Americans with a diagnosis of diabetes mellitus either type 1 or type 2, were recruited from a community health center and a church in the Midwestern part of the United States (McLeary-Jones, 2011). Data was collected using the Rapid Estimate of Adult Literacy in Medicine (REALM), the Diabetes Knowledge Test (DKT), the Diabetes Self-efficacy Scale, and the Summary of Diabetes Self-care Activities (SDSCA) Questionnaire (McLeary-Jones, 2011). The study related that low literacy may impair a person's functioning in the health care environment, affect patient-physician communication, and lead to substandard medical care (McLeary-Jones, 2011). Low literacy was shown to increase the risk for health disparities in African Americans (McLeary-Jones, 2011). Findings of the study revealed that the association between health literacy, diabetes knowledge, and the relationship of diabetes knowledge and self-efficacy were important factors in influencing a person's participation in diabetes self-management activities (McLeary-Jones, 2011). Limitations of the study included a small non-random sample, which limited the generalizability of data, and study participants that were predominantly female (McLeary-Jones, 2011).

A descriptive study by Bar-Tal, Spitzer, and Ziv, (1996) examined the moderating effect of age on the relations between symptom severity, self-care and others' care, the patients' perception of problem solving, their satisfaction with the solution, and their perception of control

over their health. The study sample was composed of 121 female and 167 male patients, who were treated in the out-patient clinics of two large Israeli hospitals (Bar-Tal et al., 1996). All study subjects were diagnosed with either peripheral vascular disease (PVD), chronic obstructive pulmonary disease (COPD), or Parkinson's disease (PD) (Bar-Tal et al., 1996). Subjects' ages ranged from 20 to 95 years old (Bar-Tal et al., 1996). The study utilized two questionnaires, the first questionnaire was concerning health-related physical and psychosocial symptoms, and difficulties in performing activities of daily living common to the aged and chronically ill (Bar-Tal et al., 1996). The second questionnaire measured the subjects' perception of the degree of control they had over their health (Bar-Tal et al., 1996). The data was collected and tape recorded by personal interviews during follow-up visits to out-patient clinics of the two large Israeli hospitals (Bar-Tal et al., 1996). Study findings suggested that age does play an important role in the relations between self-care and others' care (Bar-Tal et al., 1996). The pattern of relations differed as the younger subjects sought maximum relief of symptoms with minimum effort from the self, whereas the older subjects attempted to maximize control (Bar-Tal et al., 1996). The research indicated that when people are actively taking care of themselves and have the ability to make decisions with a sense of control over their lives, their health outcomes improve (Bar-Tal et al., 1996). Limitations of the study were that perhaps the Orem's Self-Care Deficit Nursing Theory (SCDNT) was not the best theoretical framework for the study. The SCDNT fits better with an older population, as relying on oneself for care was found to be a significant variable only among the older subjects (Bar-Tal et al., 1996). The similarities between chronic disease management of PVD, COPD, Parkinson's disease, and diabetes type 2 suggested that the study findings may be similar in diabetes self-care.

An exploratory study by Hampson, Glasgow, and Toobert, (1990) investigated the relations between personal models and self-care activities for non-insulin-dependent diabetics. Data was gathered from 46 (out of a total of 95) female outpatients, over the age of 40, who were diagnosed with non-insulin dependent diabetes mellitus (NIDDM) for at least one year, without any reported complications (Hampson, et al., 1990). Data was collected by interview, with questions regarding the cause, symptoms, course of treatment, and consequences of diabetes (Hampson et al., 1990). A follow-up interview was conducted two weeks later asking patients to provide information about their levels of self-care activities, including exercise, diet, and glucose monitoring (Hampson et al., 1990). Findings of the study indicated that personal models were generally consistent with current medical views of NIDDM, which may be listed as a study limitation, as all the subjects were recruited through physicians' offices, and may be compliant with the medical approach to managing their NIDDM (Hampson et al., 1990). The younger subjects placed a greater emphasis on treatment, which may reflect their concern to prevent or postpone condition deterioration (Hampson et al., 1990). The middle-aged and elderly subjects' findings suggested an emotional and cognitive preoccupation with disease management and control of serious complications (Hampson et al., 1990). Limitations of the study included the low acceptance rate of participation by the subjects and that only female personal models of NIDDM were studied (Hampson et al., 1990). The models discussed suggested that a patients' beliefs and emotions regarding their chronic disease such as NIDDM, affected their level of self-care agency and self-care practice.

Attitudes/Behaviors Related to Self-Care

A qualitative study by Peters, Aroian, and Flack (2011) explored the attitudes and beliefs of African Americans regarding hypertension preventive self-care behaviors. The study used the

Theory of Planned Behavior (TPB) as a guide to explore the behavioral, normative, and control beliefs of African Americans relative to initiating and maintaining self-care behaviors necessary to control blood pressure, and prevent the development of hypertension (Peters et al., 2011).

Findings from the study demonstrated the power of cultural content within attitudes and behaviors. The study discussed collective identity as a factor that influenced health behaviors and attitudes towards health care providers (Peters et al., 2011). The circle of culture, a metaphor that represented the boundaries that enfold individuals within the traditions of the larger group, was a reoccurring theme that provided a cultural and contextual perspective for understanding the TPB concepts within the African American sample (Peters et al., 2011). Mistrust of health care providers and the reluctance to seek medical care were habits identified that were passed down generationally, and prevalent in the African American community (Peters et al., 2011). Based on the participants' responses in the study, health care providers need to be more cognizant of the influence of cultural factors on individual behavior, and more sensitive to the role of mistrust in adherence to the medical plan of care. Limitations of the study were the small number of study participants (34) and that the participants were predominantly from the same geographic location of metropolitan Detroit, which is highly segregated with strong racial polarization (Peters et al., 2011). Cultural factors and mistrust of health care providers were identified as factors that influence self-care agency and self-care practice.

A cross-sectional, nonexperimental, descriptive, comparative design study was conducted by Carthon, Johnson, Hubbart, Strickland, and Nance (2010) using 68 African American women, 55 to 75 years of age, with self reported diagnosis of type 2 diabetes, residing in Arkansas. The study examined the impact of caregiving responsibilities on the diabetic health of African American primary caregiving grandmothers (Carthon, et al., 2010). Each participant was asked

their frequency of performing six self-management activities, both before and after the initiation of their caregiving responsibilities (Carthon, et al., 2010). Comparisons of the diabetic self-management activities, before and after initiation of caregiving responsibilities between the caregiving and non-caregiving groups, emphasized the impact that caregiving responsibilities had on the participants (Carthon, et al., 2010). The caregiving group results identified a decreased ability to integrate self-care actions into their daily patterns of life (Carthon, et al., 2010). Limitations of the study were that all participants were “self-reported” type 2 diabetics; the responses to the questionnaires were dependent on the participants’ ability to recall self-management activities, and the differences in the administration of the instruments (Carthon, et al., 2010). The study not only compared diabetic self-management activities between the two groups, it also identified the need for additional research to determine what factors impeded the caregiving participants motivation for action (Carthon, et al., 2010).

A comparative study conducted by Clark and Hampson (2003) examined patients’ and healthcare professionals’ beliefs and attitudes towards diabetes. The study explored discrepancies in those attitudes, which may act as barriers to effective diabetic care (Clark & Hampson, 2003). The study examined and compared healthcare providers’ attitudes of diabetes and diabetic treatment with other chronic illnesses (Clark & Hampson, 2003). Healthcare professionals that were attending a Diabetes United Kingdom conference were invited to participate, with each healthcare professional recruiting five of their patients that fit the inclusion criteria (Clark & Hampson, 2003). The healthcare professionals were given questionnaires utilizing the Diabetes Attitude Scale, 3rd version (DAS-3) (Clark & Hampson, 2003). The study results identified that healthcare professionals viewed type 2 diabetes more seriously than their patients (Clark & Hampson, 2003). Most of the healthcare professionals in the study found it

harder to treat diabetes than other chronic conditions, and felt they did not have adequate resources or time to effectively treat their diabetic patients (Clark & Hampson, 2003). The results also demonstrated several differences in beliefs and attitudes between patients and their healthcare providers that are likely to be barriers to good diabetic care (Clark & Hampson, 2003). Limitations of the study included small numbers of doctors, with most of the healthcare professionals being women (Clark & Hampson, 2003). The sample was a convenience sample, which may not have been representative, limiting the generalizability of the findings (Clark & Hampson, 2003). The study identified the importance of patient and healthcare collaboration, in the process of encouraging patient compliance to a diabetic treatment plan. Jointly identifying goals and strategies is an important component of collaboration, and may be directly related to recognizing the distinctions between the health care providers' perspectives and the patients' perspectives (Clark & Hampson, 2003).

A descriptive study conducted by Slusher (1999) explored and described self-care agency in adolescents, self-care practices in adolescents and the relationship between self-care agency and self-care practice in adolescents. The study sample consisted of 173 adolescents, ages 14 to 19, attending two different high schools, one an urban high school, and the other a rural high school in Kentucky (Slusher, 1999). The Denyes Self-Care Agency Instrument-90 and the Denyes Self-Care Practice Instrument-90 were administered (Slusher, 1999). Although self-care practice was found to be lower than self-care agency, a significant positive correlation was found between the two concepts (Slusher, 1999). The lower self-care practices score suggest that adolescent behaviors may or may not interfere with self-care practice (Slusher, 1999). The knowledge that adolescents demonstrate self-care and self-care agency can assist nurses in interpreting, understanding, and promoting self-care in adolescents (Slusher, 1999). The

positive correlation between self-care agency and self-care practices suggested that nursing measures that enhance self-care agency or self-care practice enhance overall self-care in areas such as client satisfaction, responsibility, control, autonomy, coping skills, increased health knowledge, well-being, and improved quality of life (Slusher, 1999). Limitations of the study included the small amount of existing research examining self-care in the adolescent population and the need for further research to predict self-care behaviors in adolescents (Slusher, 1999). Continued research is also needed to refine and expand the body of knowledge of Orem's Self-Care Deficit Nursing Theory with other diverse populations (Slusher, 1999).

A descriptive, analytical, and cross-sectional study was conducted by Akyol, Cetinkaya, Bakan, Yarah, and Akkus, (2007) to assess self-care agency and factors regarding self-care agency among patients with hypertension. The study sample consisted of 120 hypertensive patients from the Cardiology and Internal Diseases Polyclinic of University of Ege, Faculty of Medicine; Izmir Ataturk State Hospital; University of Selcuk, Faculty of Medicine; and Karaman State Hospital. Data was collected using the Self-Care Agency Scale and a questionnaire designed to determine socio demographic features, and evaluated by means of percentage calculation and chi-squares (Akyol et al., 2007). Study findings showed that educational situation and social influence affected self-care (Akyol et al., 2007). Self-care agency and health were shown to be related to economic, social, and educational factors (Akyol et al., 2007). Limitations of the study were that the participants were recruited from similar healthcare settings. The study assessed the self-care agency and factors among patients with a chronic disease such as hypertension, with similarities to self-care agency of other chronic diseases such as diabetes.

A descriptive pilot study conducted by Dutts, Montague, and Nichols, (2005) to measure self-efficacy, locus of control, and self-management examined relationships between the

variables and the three age groups of subjects 25 to 44 years old, 45 to 64 years old, and 65 to 84 years old. A sample of 75 African American females with type 2 diabetes mellitus was conveniently recruited from medical practices in local community settings. Data was collected by interview, utilizing the Diabetes Self-Efficacy Outcomes Expectancies Questionnaire (DSEQ), the Diabetes Specific Locus of Control (DLC) Scale, the Short Form Medical Outcomes Survey (SF-36), and a demographic and medical form (Dutts et al., 2005). Study findings did not support the assumptions that an individual's perceived control over their health would commit them to adopt health behaviors, eliminate detrimental habits, and maintain change (Dutts et al., 2005). Limitations of the study were that the sample was made up of a small homogenous, African American female group from the same geographical area (Dutts et al., 2005). The study findings suggested that these individuals lacked sufficient confidence and motivation, or self-care agency, to perform appropriate self-care behaviors, or lacked the coping skills to overcome any barriers to self-care behavior (Dutts et al., 2005).

A correlational study conducted by Bai, Chiou, and Chang, (2009), examined the factors related to self-care behavior in type 2 diabetic patients aged less than or equal to 65 years. A sample of 165 diabetic patients was recruited from outpatient settings from three hospitals in southern Taiwan (Bai et al., 2009). Data was collected by interviewing, utilizing the Personal Resource Questionnaire 2000 (PRQ 2000), the Diabetes Self-Care Scale, and the Taiwan Geriatric Depression Scale (TGDS) (Bai et al., 2009). Study findings suggested that social support, education, and duration of diabetes significantly affected self-care behavior (Bai et al., 2009). Limitations of the study included the use of non-probability sampling and that conclusions of the study's findings could not be generalized to all older diabetic patients (Bai et al., 2009). The study focused on correlations among socio-demographic characteristics, disease

condition, social support, depression, and self-care behavior, with other lifestyle variables such as smoking and personality still needing to be studied (Bai et al., 2009).

A cross-sectional analysis study conducted by Samuel-Hodge, Watkins, Rowell, and Hooten, (2009) investigated how coping styles related to diabetes appraisals and outcomes of self-care and well-being. The study sample was composed of 185 African Americans with type 2 diabetes, who were enrolled in a church-based randomized controlled trial, consisting of 24 churches (Samuel-Hodge et al., 2009). The data was collected by questionnaires during two telephone interviews. Study findings suggested that in this sample of older African American diabetics, coping styles were important in diabetes appraisals, self-care behaviors, and psychological outcomes (Samuel-Hodge et al., 2009). Limitations of the study included that the sample population represented a convenience sample, which limited the generalizability of the data to the larger population of African Americans with diabetes (Samuel-Hodge et al., 2009). The research was also limited by self-reported measures of self-care behaviors (Samuel-Hodge et al., 2009). The study findings suggested that the coping styles of African American diabetics related to their self-care behaviors or practice, which may have impacted their health, well-being and quality of life.

A descriptive, exploratory, cross-sectional design study conducted by Braitman et al. (2008) examined the relationship between social constraints and self-care activities in the management of diabetes. The study sample was comprised of 82 self-identified diabetics, ranging from the age of 22 to 79 (Braitman et al., 2008). Data was collected from online surveys using Lepore's Social Constraints Scale, the Self-Efficacy for Diabetes Measure, and the Hospital Anxiety and Depression Scale (Braitman et al., 2008). Findings of the study suggested that higher social constraints were associated with lower self-efficacy in regards to general diet and exercise, and lower self-efficacy was associated with lower self management scores

for general diet and exercise. Limitations of the study were that the cross-sectional design and correlational results did not allow for drawing conclusions about cause and effect, and the study results were based on self-reported data (Braitman et al., 2008). The study results emphasized the importance of developing interventions that assist diabetics to cope with the effects of negative interactions with members of their social network (Braitman et al., 2008). Individuals who are unable to talk to significant others about diabetes-related issues were likely to have more difficulty in adhering to a healthy diet, exercising, or any other self-care practice.

A descriptive correlational study conducted by Williams and Bond, (2002) examined self-efficacy, outcome expectancies, social support, and self-care in adult diabetics, using data collected from 94 participants, all diagnosed with either non insulin dependent diabetes mellitus (NIDDM) or insulin dependent diabetes mellitus (IDDM). Data was collected using a booklet compiled utilizing the Summary of Diabetes Self-Care Activities (SDSCA), the Treatment Adherence Measure (TAM), and the Diabetes Family Behavior Checklist (DFBC) (Williams & Bond, 2002). Findings of the study suggested that self-efficacy was consistently found to have a significant, positive association with self-care practice in three regimen areas of diet, exercise, and blood glucose testing (Williams & Bond, 2002). Diabetics who lack confidence in their self-care abilities were unlikely to perform appropriate behaviors, even when they believed that those behaviors would be beneficial to their health (Williams & Bond, 2002). Study findings suggested that diabetes education programs that focus on increasing patients' confidence in their self-care abilities were likely to be effective (Williams & Bond, 2002). Limitations of the study were the small sample of 94 participants, that data was collected by convenience, and that the data was collected by self-reporting methods (Williams & Bond, 2002).

A correlational study by Bean, Cundy, and Petrie (2007) assessed the differences between Europeans, South Asians, and Pacific Islanders in illness perceptions, self-efficacy, self-care, metabolic control, and retinopathy in diabetes. The sample population of 259, which consisted of

86 Europeans, 86 South Asians, and 87 Pacific Islanders, was recruited at an outpatient diabetic center (Bean et al., 2007). Data was collected using the Brief Illness Perceptions Questionnaire (BIPQ), the Multidimensional Diabetes Questionnaire (MDQ), the Summary of Diabetes Self-Care Activities (SDSCA), the individuals' glycosylated hemoglobin (HbA1c) values, and data related to their retinopathy (Bean et al., 2007). Findings of the study revealed that Pacific Islanders and South Asians held shorter illness timeline perceptions compared to Europeans (Bean et al., 2007). In all three groups self-efficacy was consistently related to self-care, but not necessarily to metabolic control (Bean et al., 2007). Conversely illness perceptions were less consistently related to self-care, but were associated with metabolic control (Bean et al., 2007). Limitations of the study included the data was cross-sectional and could not establish causality, as well as the data collected was self-reported (Bean et al., 2007). The study findings identified an important aspect in planning interventions. Interactions between culturally different individuals and healthcare practitioners can be problematic at times. Designing interventions to alter specific patients' perceptions could be useful in helping them change their self-care agency and self-care practice.

The literature review revealed a gap in knowledge pertaining to adult African Americans with type 2 diabetes, their self-care agency, and related self-care practice. Study findings indicated that self-care agency and self-care practice were culturally based (Becker et al., 2004; Peters et al., 2011). Age, beliefs, attitudes, and emotions played a role in self-care agency and self-care practice (Bai et al., 2009; Bar-Tal et al., 1996; Bean et al., 2007; Carthron et al., 2010; Dutts et al., 2005; Hampson et al., 1990; Clark & Hampson, 2003). Health literacy, diabetes knowledge, social support and/or constraints, individual coping styles, educational level, and the individuals' confidence levels were also identified to affect self-care agency and self-care practice (Akyol et al., 2007; Braitman et al., 2008; McLeary-Jones, 2011; Samuel-Hodge et al.,

2009;William & Bond, 2002;). Slusher (1999) explored self-care agency and self-care practice in adolescents and identified the need for further research with other diverse populations. The study identified and explored self-care agency and self-care practice in the adult African American diabetic population, living in the community setting.

Chapter 3: Method

Sample

A convenience sample consisting of 40 adult African Americans with the diagnosis of diabetes mellitus type 2, that are presently living in the western region of North Carolina was utilized for this study. The participants meeting the inclusion criteria of being African American, between the ages of 21 and 65 years old, able to speak, read, and write English, diagnosed with diabetes mellitus type 2, living independently in the community, providing their own diabetic disease management, male and female, were asked to complete the questionnaires. Exclusion criteria included being non-African American, less than 21 or greater than 65 years of age, unable to speak, read, and write English, not diagnosed with diabetes mellitus type 2, requiring assistance with community living and with diabetic disease management.

Setting

The researcher gathered data specific to self-care agency and self-care practice to address the research questions what is the self-care agency of adult African Americans diagnosed with type 2 diabetes, what is the self-care practice of adult African Americans diagnosed with type 2 diabetes, and is there a relationship between self-care agency and self-care practice in adult African Americans diagnosed with type 2 diabetes, by visiting area African American churches, requesting adult African Americans with diabetes type 2 to participate. The researcher first approached African American church leaders, as the African American population has a strong connection between God, family, and group (Frame & Williams, 1996). Religion and spirituality in the African American church forms systematic beliefs and practices that are woven into their everyday activities (Frame & Williams, 1996). The African American church is an important part of African American life, as it offers role models to African American children, increases

collective self-esteem by making available positions of leadership and responsibility, and provides emotional and financial support (Frame & Williams, 1996).

The researcher conducted snowballing, requesting referral information from current participants, to increase participation in the study. The data was collected during the Christmas holidays, making it necessary to seek out participants through referrals. Participants were not excluded based on gender.

Ethical Considerations

Once Gardner-Webb University Institutional Review Board (IRB) approval (Appendix A) was received, participants were given the survey questionnaires to complete. Participation was voluntary and the questionnaires were estimated to be completed within 60 minutes. Completion of the Informed consent form (Appendix B) was distributed to the participants and their questions answered by the researcher. Completion and return of the questionnaires (Appendices C & D) was considered the subjects' implied consent. Copyrighted identification was marked on each questionnaire distributed. Confidentiality was ensured by the removal of identifiers and all returned questionnaires remaining anonymous. Participants were asked not to put any identifying information or marks on the questionnaires. The questionnaires will remain stored in a locked cabinet in the researcher's home office.

Instruments

The Denyes Self-Care Agency Instrument (DSCAI-90) (1990) (Appendix C) and the Denyes Self-Care Practice Instrument (DSCPI-90) (1990) (Appendix D) were used to survey the study participants' self-care agency and self-care practice. The DSCAI-90 measured self-care agency, or the ability of participants to meet their universal self-care requisites (Slusher, 1999). The DSCPI-90 measured self-care practice, or the practice of self-care activities that the

participants perform in meeting their universal self-care requisites (Slusher, 1999). The DSCAI-90 and the DSCPI-90 were originally designed for adolescent populations (Slusher, 1999). Reliability and validity of the DSCPI-90 were established in nine studies that used the instrument (Slusher, 1999). Reliability and validity of the DSCPI-90 were established in 13 studies that utilized the instrument (Slusher, 1999).

Demographic information was obtained by using a three item demographic survey designed by the researcher (Appendix E). The demographic survey consisted of questions regarding age, gender, and years with diagnosis of diabetes mellitus type 2. The researcher was available to the study participants to provide clarification for questions and to collect the completed instruments.

Data Collection and Procedure

Prior to conducting the study approval was obtained from the Gardner-Webb University Internal Review Board (IRB). Permission to use the Denyes Self-Care Practice Instrument (DSCPI-90) and the Denyes Self-Care Agency Instrument (DSCAI-90) was obtained in writing from the instrument developer Mary Denyes, PhD, RN, FAAN (Appendix F). African American church leaders in the local community were contacted to request permission to visit and offer participation in the research study. Once approval was granted by the church leaders, and a schedule was established to conduct the study, the survey questionnaires were explained to the participants and any questions were answered. A number was assigned to the questionnaires to maintain confidential surveying. The completed questionnaires were returned by the participants to the researcher in a sealed envelope. The data results were entered into the researcher's computer. The researcher's computer is password protected to ensure confidentiality of materials for this study.

In conclusion, diabetes mellitus type 2 continues to increase, specifically for African Americans (ADA, 2011). The researcher identified a need to investigate self-care agency and self-care practice of adult African Americans with diabetes mellitus type 2. The comprehensive literature review identified a gap in the knowledge concerning this population. Through a descriptive quantitative methodology, the researcher examined Orem's Self-Care Deficit Nursing Theory (SCDNT) with the population of this study.

Chapter 4: Results

Descriptive statistics were used to depict demographic data relating to the variables of the study. Univariate statistics of central tendency were calculated for all interval level data: age, years being diagnosed with type 2 diabetes, and gender. Of the 40 subjects surveyed, 35 subjects completed the data collection for a return rate of 87.5%. Of the 35 subjects participating in the study, the mean age was 58.1 (SD=5.48), with subjects ranging in age from 45 to 65 years. The average number of years diagnosed with type 2 diabetes was 8.57 (SD=4.96). The majority of the study participants, 65.7%, were female. All of the study participants were African American.

Results are presented for each of the three research questions generated to guide this study. Results are based on the quantitative data analysis.

Research Question 1: What is the self-care agency of adult African Americans diagnosed with type 2 diabetes?

Results from the DSCAI-90 revealed a mean self-care agency score of 76.5 (Table 1) that indicated the presence of self-care agency in the study participants. Reported self-care agency scores ranged from 57.4 to 90.3 on a scale of 0-100, with the numbers closest to 100 indicating a higher percentage of self-care agency or ability to meet their own self-care needs. The presence of self-care agency suggested that adult African Americans with type 2 diabetes did have the ability to meet their own self-care, as assumed by Orem's (2001) SCDNT theory.

Research Question 2: What is the self-care practice of adult African Americans diagnosed with type 2 diabetes?

Results from the DSCPI-90 revealed a mean self-care practice score of 72.5 (Table 1) that indicated the presence of self-care practice. Reported self-care practice scores ranged from 43.9 to 91.7 on a scale of 0-100, with the numbers closest to 100 indicating a higher percentage of

self-care practice. Although the mean of self-care practice score was 4.1 points lower than the mean self-care agency score, the score indicated that adult African Americans with type 2 diabetes did participate in self-care practice.

Research Question 3: Is there a relationship between self-care agency and self-care practice in adult African Americans diagnosed with type 2 diabetes?

Analysis of the relationship between self-care agency and self-care practice revealed a significant positive correlation between the two concepts. The Pearson product-moment correlation coefficient was .66 ($p \leq .0001$). Self-care agency was shown to be higher than self-care practice, 76.5 vs. 72.5. The positive correlation between self-care agency and self-care practice support the assumption of Orem's (2001) SCDNT that self-care agency and self-care practice are positively correlated.

Table 1. Summary of Scores from the DSCAI-90 and DSCPI-90 (N=35)

<u>Variable</u>	<u>Mean</u>	<u>Standard deviation</u>	<u>Range</u>
Self-care agency	76.5	9.6	57.4-90.3
Self-care practice	72.5	12.3	43.9-91.7

Chapter 5: Discussion

Significance of the Findings

The researcher was welcomed and treated courteously by the African American church leaders. The church leaders were willing to allow the researcher access to their congregations, however they were very protective, requesting all the details of the research study, and how the results would be used. The researcher first approached African American church leaders, as the African American population has a strong connection between God, family, and group (Frame & Williams, 1996). Religion and spirituality in the African American church forms systematic beliefs and practices that are woven into their everyday activities including their self-care agency and self-care practice (Frame & Williams, 1996). The African American church is an important part of African American life, as it offers role models to African American children, increases collective self-esteem by making available positions of leadership and responsibility, and provides emotional and financial support (Frame & Williams, 1996). Participants were less reluctant to participate when their church leaders were in agreement with their participation in the study. Distrust of researchers related to the Tuskegee Syphilis Study conducted from 1932 to 1972 on poor black sharecroppers, could have influenced the study participants (Fowler, 2006). The African American men in the Tuskegee Syphilis Study were purposely not treated for their syphilis so that the effects of the progressing disease could be studied without their knowledge or permission (Fowler, 2006). The study led to beliefs of institutional racism, discriminatory practices, and mistrust of the health care system by African Americans (Fowler, 2006). The majority of African Americans participants were polite but cool in their mannerisms toward the researcher, who was Caucasian. The researcher's questions were answered but no extra data or information was shared by the participants. Many African Americans in the congregations or those referred to the researcher by participants were reluctant to share that they had been

diagnosed with diabetes type 2. Many female participants told the researcher that their diabetes was “their own business, nobody else’s”, and did not want their church brothers and sisters talking about them. This was a surprising finding to the researcher. The majority (65.7%) of study participants was female, interestingly enough, which mirrored the congregations’ makeup. No male congregation members voluntarily told the researcher that they had diabetes type 2. The male participants in the study were privately referred by female participants, were reluctant to disclose any information to the researcher, and required strong encouragement to participate by the referring female participant.

The questionnaires’ scores reflected the self-reported data of the study participants. The researcher noticed that the majority of study participants were obese, with some being morbidly obese. The study findings revealed that self-care agency and self-care practice were both present and positively correlated within the study population; however the researcher questioned whether the self-reported data was totally accurate or if the participants gave the data they thought would reflect best on them. With the data revealing that many of the participants self-reported that their nutritional intake, exercise habits, and ways of dealing with stress were beneficial habits in managing their diabetes, the researcher questions their knowledge level and whether there was denial present. It would have been interesting to have had some objective data such as the participants’ current BMI or weight to compare to the data results.

The purpose of this quantitative descriptive study was to identify self-care agency and self-care practice in African Americans with type 2 diabetes, and to determine any correlation between the two concepts. The presence of self-care agency, or their ability and motivation to learn suggested that adult African Americans with type 2 diabetes did have the ability to meet their own self-care needs, as assumed by Orem’s (2001) SCDNT theory. The presence of self-

care practice, or the activities they perform to manage their diabetes, supported the assumption that adult African Americans with type 2 diabetes do participate in self-care in meeting their self-care requisites, as assumed by Orem's (2001) SCDNT theory. The positive correlation between the two concepts supported the assumption of Orem's (2001) SCDNT, that self-care agency and self-care practice are positively correlated. The lower self-care practice mean score, as compared to the self-care agency mean score, suggested that behaviors of adult African Americans with type 2 diabetes may interfere with self-care practice.

Implications for Nursing Practice/Education

The study provided descriptive data on self-care agency and self-care practice in adult African Americans diagnosed with type 2 diabetes. The data added to nursing's body of knowledge of self-care in adult African Americans diagnosed with type 2 diabetes. The knowledge that adult African Americans diagnosed with type 2 diabetes demonstrated both self-care agency and self-care practice can assist nurses in interpreting, understanding, and promoting self-care in adult African Americans diagnosed with type 2 diabetes.

The positive correlation between self-care agency and self-care practice may suggest that nursing interventions that enhance self-care agency and/or self-care practice may enhance overall self-care. Benefits from self-care include client satisfaction, control, responsibility, independence, autonomy, coping skills, increased knowledge of health, well-being, and an improved quality of life (Slusher, 1999). By utilizing Orem's (2001) SCDNT, nurses can provide interventions that function in both a supportive and educative role in promoting self-care in adult African Americans with type 2 diabetes (Slusher, 1999).

Limitations of the Study

Limitations of the study included that the data was self-reported and collected from adult African Americans living in one geographical region, western North Carolina. Generalization of the findings is limited due to the small sample size of 35. The fact that the data was collected during the Christmas holidays may have limited the number of participants in the study.

Recommendations for Future Research

Since the study was limited to one geographical area in North Carolina, the researcher suggests further studies be conducted from a more diverse region, with a larger sample size, to broaden the findings. The sample was collected initially from church groups, with referrals obtained from those groups that led into the surrounding community. A more random sampling would create a more diverse study population of African Americans.

The subjectivity of the research could be limited by including objective data such as a current glycosylated hemoglobin (HbA1c) value, participant's height, weight, and body mass index to compare to the self-reported data. During the period of data gathering the researcher noted that the majority of participants were obese, raising the question of whether the participants were answering the survey questions honestly, answering to meet the researcher's expectations, or truly believed that they were managing their diabetes correctly. The race of the researcher may have limited or influenced the participants' responses, as the researcher was Caucasian. As previously discussed, distrust of researchers, stemming from the Tuskegee Syphilis Study, bred beliefs of institutional racism, discriminatory practices, and mistrust of the health care system by African Americans (Fowler, 2006), which could have influenced the study participants' responses.

Importance of the Findings for Nursing

The results of the study supported the usefulness of Orem's (2001) SCDNT, with an African American population with type 2 diabetes. Study findings identified the need for further

examination of self-care agency and self-care practice in the adult African American population to identify possible learning barriers and cultural factors that may influence chronic disease management. Further research is needed to also examine self-care in various other groups within the African American population. According to the literature, self-care is a key factor in health promotion (Slusher, 1999). The benefits of self-care include client satisfaction, responsibility, control, independence, autonomy, cost containment, increased health knowledge, coping skills, well-being, and an improved quality of life (Slusher, 1999). These benefits would be the outcomes of enhancing self-care through health promotion, support, and education. Working collaboratively with the adult African American population would benefit all cultural groups, as disease management and educational programs could be customized to each group's unique learning style and belief system, utilizing research findings. Collaboration can decrease mistrust and promote cooperation and positive outcomes in health care.

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support in the self-care behaviors of diabetics. *Psychology, Health & Medicine*, 7(2),
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Appendix A

Gardner-Webb University IRB Approval Letter

Gardner-Webb University IRB Approval Letter



THE INSTITUTIONAL REVIEW BOARD of GARDNER-WEBB UNIVERSITY

This is to certify that the research project titled
Self-Care Agency and Self-Care Practice in African American Diabetics

being conducted by Martha Eddings

has received approval by the Gardner-Webb University IRB.

Date 11/14/11

Exempt Research

Signed Cindy Miller
Department/School/Program IRB Representative
Vickie Walker
Department/School/Program IRB Member

Expedited Research

Signed _____
Department/School/Program IRB Representative

Department/School/Program IRB Member

IRB Administrator or Chair or Institutional Officer

Non-Exempt (Full Review)

Signed _____
IRB Administrator

IRB Chair

IRB Institutional Officer

Expiration date 11/14/12

IRB Approval:

 X Exempt Expedited Non-Exempt (Full Review)

Appendix B
Informed Consent

Informed Consent

Information for Study Participants

Title: Self-Care Practice and Self-care Agency in adult African American Diabetics

Principal Investigator: Martha Eddings, BSN, MSN Candidate, Gardner-Webb University

Background and Purpose of Study: The aim of this study is to identify the self-care practice and self-care agency of adult African American diabetics living in the community, independently managing their diabetes.

Procedure: Adult African American diabetics will be asked to complete the two questionnaires regarding self-care practice and self-care agency. Participants will be called invited to meetings at local African American churches and/or invited to participate after their diabetic support group meetings. Participants will be asked to refer other diabetics to participate in the study. Individuals referred to the researcher will be contacted by either telephone or mail to invite their participation.

Benefits: If you take part in this study, there may be no immediate, direct benefit for you. However, by taking part in this study, the researcher hopes to gain valuable information about managing African American diabetic patients.

***Risks:** There are no direct risks to you by taking part in this study. Questions about your diabetic practice and your ability to manage your diabetes will be asked on two questionnaires, (DSCPI-90 & DSCAI-90).

What are the Costs? There are no monetary costs to you associated with taking part in this study. You will not receive any payment for taking part in this study.

Confidentiality: Every attempt will be made to maintain your confidentiality during and after this study. As part of maintaining confidentiality, you will be identified by a number. All information will be held confidential.

The information you provide will be kept for at least five years after the study is done. The information will be kept in a secure area (i.e. locked filing cabinet). Your name and any other identifying information will not be attached to the information you gave. Your name will also never be used in any presentation or publications of the study results.

The information gathered for this study may be looked at again in the future to help answer other study questions. If so, the ethics board will first review the study to ensure the information is used ethically.

The results of this study will be included as part of a thesis. Your name will not be mentioned in the document. No participant in this study will be identified by name.

Freedom to Withdraw: If at any time you do not wish to continue in the study, for whatever reason, you may withdraw. You do not have to give a reason for no longer continuing in the study.

What are my Rights as a Participant: Taking part in this study is completely voluntary. If at any time there is a question you do not wish to answer, please do not feel any pressure to do so. You may choose to take part or you may leave the study at any time.

You have the right to learn the results of this study. If you are interested in learning more about when and how to get the results of this study, you may contact Martha Eddings at 704-898-2557. You will receive a signed copy of the consent.

Whom Do I call if I have Questions or Problems? I understand that Martha Eddings, at 704-898-2557, will answer any questions that I have about the research project.

Signature of Research Participant

Signature of Witness (if available)

Printed Name

Printed Name

Date

Date

Signature of Investigator

Date

Consent Form

Title: Self-Care Practice and Self-Care Agency in adult African American Diabetics

Principal Investigator: Martha Eddings, BSN, MSN Candidate, Gardner-Webb University

Questions:

Do you understand that you have been asked to be in a research study?	Yes	No
Have you read and received a copy of the attached information sheet?	Yes	No
Do you understand the benefits and risks involved in taking part in this research study?	Yes	No
Have you had the opportunity to ask questions and discuss the study?	Yes	No
Do you understand that you are free to refuse to participate or withdraw from the study at any time?	Yes	No
Has the issue of confidentiality been explained to you? Do you understand who will have access to your information?	Yes	No

This study was explained to me by: _____

I agree to take part in this study.

Signature of Research Participant

Signature of Witness (if available)

Printed Name

Printed Name

Date

Date

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator

Date

Appendix C

Denyes Self-Care Agency Instrument (DSCAI-90)

With Scoring Instructions

©Mary Jean Denyes 1990

Source # _____

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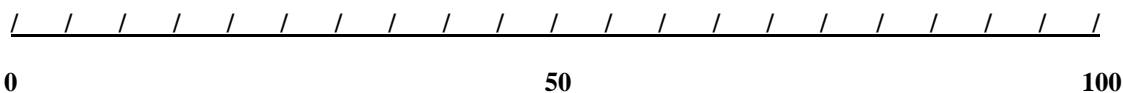
ID# _____

DENYES SELF-CARE AGENCY INSTRUMENT (DSCAI-90)**General Instructions**

- A. Please fill in the number that best answers each question for you.
- B. There are no right or wrong answers.
- C. Please feel free to write in comments.
- D. For all questions about your health, please answer based on what you think health is for you.

Directions:

Please fill in any number from 0 to 100 that best answers each question for you. 0 means "nothing"; 100 means "everything"; numbers in between mean your answer is between nothing and everything. You can think of it like a line with 0 at one end, 100 at the other end, and all the other numbers in between like this.



- _____ 1. On a scale of 0 to 100, how much do you know about your body and how it works?
- _____ 2. On a scale of 0 to 100, how much do you know about eating as it relates to your health?
- _____ 3. On a scale of 0 to 100, how much do you know about exercise as it relates to your health?
- _____ 4. On a scale of 0 to 100, how much do you know about sleep and rest as they relate to your health?
- _____ 5. On a scale of 0 to 100, how much do you know about smoking as it relates to your health?
- _____ 6. On a scale of 0 to 100, how much do you know about stress as it relates to your health?
- _____ 7. On a scale of 0 to 100, how much do you know about your own personal strengths?

The questions change some; please keep filling in numbers from 0 to 100. 0 means "not at all"; 100 means "totally".

- _____ 8. On a scale of 0 to 100, how aware are you of your own sexuality?
- _____ 9. On a scale of 0 to 100, how aware are you of your feelings?
- _____ 10. On a scale of 0 to 100, how able are you to describe the different feelings you experience?
- _____ 11. On a scale of 0 to 100, how able are you to talk about your feelings?
- _____ 12. On a scale of 0 to 100, how much experience have you had in making decisions about your health?
- _____ 13. On a scale of 0 to 100, how much do you value your health?
- _____ 14. On a scale of 0 to 100, how much does your family value their health?

DENYES SELF-CARE AGENCY INSTRUMENT (DSCAI-90)

Scoring Instructions

1. A total score and six scale scores can be obtained.
2. **Recode four items: #20, 21, 30, 31.** Recode by subtracting item score from 100 (e.g., original score on item #20 = 30, recode as $100 - 30 = 70$).
3. Determine **total score: obtain mean score for items #1-34** (i.e. sum scores for items #1-34 and divided by 34). Note: Be sure items 20, 21, 30, 31 have been recoded prior to calculation.

4. Determine Six **Scale Scores:**

Scale #1: Ego Strength:

Obtain mean for items # 22-24, 32-33

Scale #2: Valuing of Health:

Obtain mean for items # 13-15

Scale #3: Health Knowledge and

Decision-making Capability

Obtain mean score for items # 1-7, 12, 16-18, 25, 34

Scale #4: Energy

Obtain mean score for **items** # 20, 21, 30, 31

(Note these items should have been re-coded as noted above.)

Scale #5: Feelings

Obtain mean score for items # 8-11.

Scale #6: Attention to Health

Obtain mean score for items # 19, 26-29

Appendix D
Denyes Self-Care Practice Instrument (DSCPI-90)
With Scoring Instructions

©Mary Jean Denyes 1990

Source # _____

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ID#

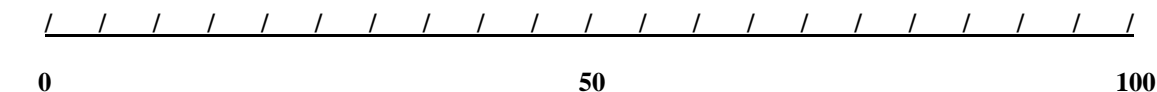
DENYES SELF-CARE PRACTICE INSTRUMENT (DSCAI-90)

General Instructions

- A. Please fill in the number that best answers each question for you.**
- B. There are no right or wrong answers.**
- C. Please feel free to write in comments.**
- D. For all questions about your health, please answer based on what you think health is for you.**

Directions:

Please fill in any number from 0 to 100 that best answers each question for you. 0 means none of the time; 100 means all of the time; numbers in between mean your answer is between none and all the time. You can think of it like a line with 0 at one end, 100 at the other end, and all the other numbers in between like this.



- _____ 1. What percent of the time do you do things that are good for your health?
- _____ 2. What percent of the time do you take good care of your health?
- _____ 3. What percent of the time do you follow through on decisions you make about your health?
- _____ 4. What percent of the time do you put off doing things that would be good for your health?
- _____ 5. What percent of the time do you eat breakfast?
- _____ 6. What percent of the time do you eat the kinds of foods you think are necessary for your health?
- _____ 7. What percent of the time do you eat a balanced diet?
- _____ 8. What percent of the time do you do things to maintain or achieve good nutrition for yourself?
- _____ 9. What percent of the time do you do things to get the amount of activity you think is necessary for your health?
- _____ 10. What percent of the time do you do things to get the amount of rest you think is necessary for your health?
- _____ 11. What percent of the time do you do things to maintain or achieve a balance between rest and activity?
- _____ 12. What percent of the time do you do things to get the amount of time alone you think is necessary for your health?
- _____ 13. What percent of the time do you do things to get the amount of time with others that you think is necessary for your health?

- _____ 14. What percent of the time do you do things to maintain or achieve a balance between time alone and time with others?
- _____ 15. What percent of the time do you do things to keep your bladder and bowel habits normal?
- _____ 16. What percent of the time do you do things to keep yourself safe?
- _____ 17. When you feel stressed, what percent of the time do you do things to feel less stressed?
- _____ 18. What percent of the time do you do things that help you to “be all that you can be” as a person?

DENYES SELF-CARE PRACTICE INSTRUMENT (DSCPI-90)**Scoring Instructions**

1. One overall score is obtained for the DSCPI-90.
2. Recode Item #4 by subtracting the item score from 100.
3. To determine the overall score, after recoding #4, calculate a mean for item #1-18.

Appendix E
Demographic Questionnaire

Demographics Questionnaire

Number Assigned: _____

Age: _____

Gender: _____

How many years have you been diagnosed with diabetes type 2? _____

Appendix F

**Permission to use the Denyes Self-Care Agency Instrument (DSCAI-90) and the
Denyes Self-Care Practice Instrument (DSCPI-90)**

ed Eddings

eddings1983@gmail.com

To

m.denyes@wayne.edu

date

Mon, Jul 11, 2011 at 6:03 PM [hide details](#) Jul 11

subject

DSCAI-90 and DSCPI-90

mailed-by

gmail.com

Dr. Denyes,

My name is Martha Eddings and I am a nursing education graduate student at Gardner-Webb University, Boiling Springs, NC. I am interested in doing my thesis using Orem's SCDNT and would like to use your instruments. I have been unsuccessful in locating a copy of them to review. Can you help me?

Thank you in advance for your time.

Sincerely,

Martha Eddings, RN, BSN

Reply Forward

Reply|

[Mary J Denyes](#) Martha: Thank you for your email and letter informing me of your interest in ... 11:16 PM (22 hours ago)

Martha:

Thank you for your email and letter informing me of your interest in pursuing research on self-care agency and self-care practices of adults in the community who are diagnosed with diabetes mellitus. As I have been retired for a number of years, I do not check my email very frequently, and I am often away from home/email contact as I travel a great deal. I regret my delay in responding to your requests, but am attaching copies of both the DSCAI-90 and the DSCPI-90 that you requested. I also have attached copies of scoring instructions for each instrument. While I have reliability and validity data from earlier studies, hopefully you can/have obtained such information as you need about that from the literature. I also am pleased to grant you permission to use these instruments in your research at Gardner-Webb University in Boiling Springs, NC. I will request in return for sharing the instruments with you, that you be attentive to including the copyright information on all copies of the instruments you use, that you not share the instruments with others or use them in other research without first contacting me. I also would request that you keep me informed about your ongoing work. I would love to have copies of any proposals/papers you prepare related to this research and to know a bit about how your work is proceeding. Thank you for your kind remarks in your letter about my contribution to the discipline of nursing.

I look forward to continuing contact with you. Please do not hesitate to contact me again if you have questions about the instruments.

Wishing you the best in your work.

Mary J. Denyes, PhD, RN, FAAN

